volume by Dr. Grenfell and his collaborators is the first attempt to set forth and co-ordinate the more important features of our present knowledge of Labrador. The task has been conscientiously and ably performed and we may welcome this book as the culmination, thus far, of the writings on Labrador as a whole, an authoritative geographical work on a part of our continent that is about as large as Alaska and which, in the course of development, promises to bear a part in the world's work that will not be inconspicuous.

For some seventeen years, Dr. Grenfell has been well known for the humanitarian work to which he is devoting his life in Labrador. All this time he has been collecting facts about the country, its white, Indian and Eskimo inhabitants or summer sojourners, their industries and state of culture. He has selected material from this mass of information to fill ten of the sixteen chapters of the book. Ten other writers, skilled in various branches of science, who have given special attention to one or another phase of Labrador, have written the remaining chapters and the six appendixes. The whole product shows us Labrador as it is now known; and one of the best features of the work is that its chapters and to a considerable extent, its appendixes, which deal with the Insects of Labrador, the Marine Crustacea, the Mollusks, and lists of the Mammals, Birds and Crustacea, are well adapted to interest and edify the general reader.

The chapters by Dr. Grenfell have to do largely with the human and economic aspects of the country. He treats of the routes to Labrador, of the peoples of the coast, the missions, the reindeer, whose recent introduction promises to be brilliantly successful, the dogs and their great usefulness, the cod, salmon, herring and other fish and the fisheries and the ocean mammals. He also has a very significant chapter which he entitles "The Physiography of Labrador," though he does not give to the word "physiography" exactly the meaning that American geographers apply to it, for he presents not only a sketch of the surface features but also the climatic conditions and their effects upon animal and vegetable life, the tidal movements and the prevailing weather and the activities of the people, on or off shore, for each month of the year. This chapter is one of his finest contributions to the work.

The historical introduction is supplied by Mr. W. S. Wallace of Oxford; no better man could have been selected to write of the interior of the peninsula than Dr. A. P. Low of the Canadian Geological Survey; Prof. R. A. Daly, one of our prominent geologists, writes of the geology and scenery of the northeast coast and Mr. William B. Cabot, of the Indians whose habits he has had unique opportunities for observing.

The geological map in colours is not quite adequate geographically. It indicates the large Nascaupee and George rivers as, to a great extent, unexplored, the fact being that the *Bulletin* of the American Geographical Society, in September, 1906. published a map giving the entire courses of these rivers and this information has been reproduced on maps of the Canadian Geological Survey and on many maps published in Europe.

Géologie. Par Stanislas Meunier, Professeur de Géologie au Muséum national d'Histoire naturelle, et à l'école nationale d'agriculture de Grignon. xxix and 988 pp., Illustrations and Index. Vuibert et Nony, Paris, 1909.

Professor Meunier's object has been to write a book which should be practical, namely, one which should contain, in one volume, everything which the would-be geologist ought to know in order to become efficient in his chosen work. He has,

therefore, omitted some things which are generally found in the larger text books, such as the history of geology, or the descriptions of the various theories which have succeeded each other prior to those now accepted, and similar topics of a more philosophical character. On the other hand, he includes much for which the student, as a rule, must consult separate textbooks, namely, the essentials of the allied sciences: mineralogy, petrology, and palæontology. These chapters, while necessarily brief, are none the less regular small textbooks of their respective sciences, and this "geology" might justly be called a guide to all the earth sciences but for the almost complete omission of that which American geologists understand by the term of physiography.

With regard to geology proper, the author adheres to the division into structural, dynamic, and historical geology. The latter, especially, is treated in a way that reveals the talent of the author for "practical" teaching. The strict adherence, for each period treated, to one and the same arrangement of the contents of the chapter, brings out the characteristics of each with extraordinary clearness, and makes every paragraph accessible for the purposes of a comparative study in a way rarely found in other texts. For each separate period are given (1) the historical explanation of its name or names; (2) the description of a typical example of the formation; (3) its subdivisions and facies, both in France and in foreign countries; (4) its commercially valuable rocks and minerals; (5) a description of the soils of the formation. It is obvious, that for purposes of reference such an arrangement can hardly be excelled.

In his classification of the matter pertaining to dynamical geology, however, the author has been less fortunate. The division of geological forces into endogeological and exogeological groups, to be sure, is no more artificial than similar divisions of other texts; but in his subdivisions one often has the feeling of an unjustified straining of natural conditions in order to satisfy the needs of the system. The endogeological forces are said to represent three classes: (*a*) cortical, (*b*) volcanic, (*c*) bathydrical; *a* to include crust movements proper: shore line variations, folds, faults, earthquakes, etc.; *b* to include volcanic eruptions, *e. g.* the action of forces starting at great depth inside the earth; *c* to include artesian wells, hot springs, mineral veins, metamorphism, *e. g.* the action, mostly chemical, of the waters of the deep. But while cleverly devised, a system which separates things belonging so closely together as do some of *a* and *b*, and again of *b* and *c*, must lose much of its theoretical value when used as a basis for classroom work.

An enumeration of the subdivisions of the exogeological forces will suffice to show that they present similar defects, though in a lesser degree. They are: (*a*) "epipolhydric," or action of the surface waters; (*b*) oceanic; (*c*) glacial; (*d*) eolian; (*e*) biological.

No mention of the book would be complete without including its remarkable index, which in itself constitutes an actual dictionary of matters pertaining to geology. It is not a mere alphabetical list of names and subjects, with a larger or smaller list of figures after each word, but after each page reference the character of that reference is given, saying whether it contains the definition, or occurrence, or composition, or uses, or geographical distribution, of the rock, country, fossil, mineral, or whatever it be, in question. By reading up the references on any one subject, the student can then easily compile a regular monograph of that subject, and thus acquire the habit of making systematic cross-sections through the substance of his study that cannot fail to greatly increase his mastery of it.

The book is illustrated more sparingly than most books of this sort; thus, for instance, one fossil only is given for every geological division. This is due partly to the desire to keep the size of the book within the limits of a handbook, partly to the pedagogical consideration of the author that one illustration can be remembered better than a multitude of them, and partly to his principle that specimens should be studied in the museum rather than in books. As far as book study goes in geology this volume certainly substantiates its claim that no other will be needed by the student before he begins to specialize. French students are fortunate to have such a book available, and American scholars, too, may find occasion for being thankful for whatever knowledge of French they possess if it enables them to use the book for European references. M. K. G.

Lehrbuch der praktischen Geologie. Arbeits- und Untersuchungsmethoden auf dem Gebiete der Geologie, Mineralogie und Palæontologie. Von Dr. Konrad Keilhack. 2nd Edition. xvi and 841 pp., 2 colored plates, 348 illustrations in the text and index. Ferdinand Enke, Stuttgart, 1908.

The first edition of this work was most heartily welcomed by German teachers of Geology. The present edition has been largely recast, is nearly double the size of the first issue, and the author has enriched his book by the collaboration of a number of well-known specialists. These new chapters supply many suggestions for field geological work, as, for example, in high mountain regions by Prof. Rothpletz, in the tropics and sub-tropics by Dr. Passarge, in the study of volcanoes by Prof. Sapper, and of glaciers and inland ice by Dr. von Drygalski. The maps and illustrations are very numerous and instructive. From its first appearance, this work took its place as one of the best and most practical textbooks for use in the higher schools.

The Life of Philibert Commerson. An Old World Story of French Travel and Science in the Days of Linnæus. By the late Captain S. Pasfield Oliver. Edited by G. F. Scott Elliot. xvii and 242 pp., Illustrations and Index. John Murray, London, 1909. 10s. 6d.

Commerson was one of the greatest natural history specialists of his time. While his leading subject was botany, he made important contributions to other branches of the science. He was "Doctor in Medicine, Botanist and Naturalist to the King of France," and in his long journey around the world with the great explorer De Bougainville he discovered about 3,000 new species and some 60 new genera of plants. Cuvier wrote of him that if he had published his own observations he would have been in the foremost rank of naturalists, but "unfortunately he died before he had put the final touch to his collections and those to whom his manuscripts and herbaria were entrusted neglected them in a culpable manner."

This story of his life and work was a labour of love on the part of Captain Oliver, who died, however, before he had completed his book. The work has been ably finished and edited by Mr. Scott Elliot. It is largely composed of Commerson's vivid writings, and is especially interesting in its account of his own monumental work on De Bougainville's voyage and for the sidelights it throws upon that historic event.

It was upon that voyage that De Bougainville hoped to solve the vexed question of the existence of a great land now known as Australia. For this purpose, he sailed due west from Tahiti and finally saw the heavy seas foaming on the